

# Airworthiness Limitations Section (ALS) Part 2 Damage Tolerant Airworthiness Limitation Items (DT - ALI)

**Revision 07** 

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ISSUE: JUN 30/21



# AIRWORTHINESS LIMITATIONS SECTION

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#### **REVISION STATUS**

The ALS Part 2 is approved and Variations must also be approved.

The technical content of this document is approved under the authority of the DOA ref. EASA.21J.031.

Note: the present Revision includes ALS data already approved either by EASA for major changes or by Airbus under DOA privilege for minor changes.

REVISION NUMBER	APPROVAL REFERENCE	APPROVAL DATE
07	V050221070	JUN 30/21

This Revision contains all approved changes to A350 ALS Part 2 since the last Revision.

This includes changes published through the following Variations:

VARIATION NUMBER	REASON OF THE VARIATION
	Introduction of tasks 535000-00030-01A and 535000-00031-01A and the deletion of tasks 535000-00010-01A and 535000-00020-01A.



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This includes also additional changes that were not published through Variations. For detailed traceability in the SOC, group of changes have been defined as follow:

GROUP OF CHANGES	REASON OF THE CHANGE
А	Miscellaneous changes: - Introduction of modifications Applicability changes Access changes.

EASA and FAA have accepted that some maintenance procedures related to scheduled maintenance tasks, are published after entry into service of the first aircraft. The committed publication dates are no later than three years prior to the estimated first need date based on the highest aircraft utilization assumption considered in the MRB Report.

The latest publication schedule ref 00V207A0002/C01, which is agreed by EASA and approved by FAA, identifies the task titles, thresholds and the committed publication dates and is available under Airbus World.



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#### **COMPLIANCE TIME**

Airbus anticipates that a dedicated Airworthiness Directive (AD) will be released to mandate the update of the Operators approved Maintenance Program (OMP) according to Airbus A350 ALS Part 2 Revision 7. The compliance chapter of this future AD will give an implementation period for introduction of the new or revised instructions and airworthiness limitations introduced by this Revision in the OMP. Airbus recommends Operators to consider the implementation of these changes in the OMP at the next scheduled opportunity in order to anticipate future AD requirements.

Maintenance tasks in SECTION 3 and SECTION 4 will also be mandated by the future AD and are to be accomplished prior to the new/revised thresholds and/or intervals provided in this Revision, except for the items listed in the below table. For these items listed in the table below, a compliance time is provided for aircraft that have already exceeded or are close to exceeding the new or revised thresholds and/or intervals. In such a case, maintenance tasks in SECTION 3 and SECTION 4 are to be accomplished prior to the new/revised thresholds and/or intervals provided in this Revision or by the compliance time provided for each item, whichever occurs later. When applicable, the compliance time deadlines are indicated in the table below as advanced information for Operators in order to anticipate future AD requirements.

SEC	CTION	REV CODE	ITEMS	VARIATION NUMBER (when applicable)	COMPLIANCE TIME (1)	COMPLIANCE TIME APPLICABILITY
	3	R	53500-00030-01A	6.1	JUN 30/23	MSN 0006 MSN 0007 MSN 0010 MSN 0014

(1) Without exceeding A350 ALS Part 2 Revision 6 requirements, if existing.



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#### **SECTION 1. INTRODUCTION**

#### 1. GENERAL

The ALS Part 2 provides mandatory instructions and airworthiness limitations arising from fatigue and damage tolerance evaluation of damage tolerant structural elements whose failure could contribute to catastrophic failure of the aircraft. The requirements quoted in this document are classed as Damage-Tolerant Airworthiness Limitation Items (DT ALIs) and shall be complied with, as per EASA Part M.A.302 – Aircraft Maintenance Program.

Additional information concerning DT ALI requirements can be found in the following Airbus supporting publications:

- Maintenance Planning Document (MPD)
- Aircraft Maintenance Data
- Non destructive Testing Data
- Structural Repair Data
- Maintenance Review Board Report (MRBR)
- Service Bulletins (SB).

# 2. APPLICABILITY

# 2.1 GENERAL APPLICABILITY

The A350 ALS Part 2 applies to the following aircraft series and models:

AIRCRAFT SERIES	AIRCRAFT MODELS
A350-900	A350-941
A350-1000	A350-1041

#### 2.2 WEIGHT VARIANT (WV) APPLICABILITY

DT ALIs may have different limitations depending on the Weight Variant (WV) or configuration of each aircraft.

To minimize the number of individual DT ALI maintenance requirements, the WV requirements may be grouped where they are similar. The group numbers are stated in the table below.

This DT ALI document is applicable to the following Weight Variants and associated groups:

AIRCRAFT MODELS	WEIGHT VARIANTS	GROUP (if any)
A350-941	000, 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 023	No Grouping
A350-1041	000, 001, 002, 004, 005, 009, 010, 011	No Grouping

In the case where a modification introduces a new WV not listed in the above table, and no ALS Part 2 Variation is published for giving its applicability, the instructions and airworthiness



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limitations applicable to the associated group apply. The above WV applicability table will reflect the new WV in the next ALS Revision.

E.g. Modification X introduces WV018 for an A350-941.

Aircraft embodying modification X have to apply the instructions and airworthiness limitations applicable to the A350-941 group, even if WV018 is not listed in the above table.

It is the Operator's responsibility to refer to the applicable WV, and to ensure that the tasks performed are applicable to the WV of the concerned aircraft.

The applicable WV for each individual aircraft at delivery can be found in the product Cross Reference table on AirN@v Line Maintenance. This table does not necessarily reflect the actual current status of the aircraft. This should be confirmed using the WV Identification List that can be found in the ASR introduction on AirN@v Line Maintenance Chapter 00-61-08 Structural Repair Instructions – Introduction (to check for the possible embodiment of the referenced Service Bulletins).

For aircraft having multiple WV configurations possibility, the limits of the WV of the highest MTOW have to be applied.

#### 3. MAINTENANCE PROGRAM PUBLICATION

The published maintenance program content is provided in compliance with CS 25.571, CS 25.1529 and CS 25 Appendix H, for aircraft operating up to the Publication Trigger quoted in the table below. Operation beyond these values requires an update of the ALS Part 2 data that are approved by the EASA. Should any operator envisage future operations beyond the quoted values, they must first contact Airbus for advice.

AIRCRAFT SERIES	PUBLICATION TRIGGER (whichever occurs first)	
	FLIGHT HOURS (FH)	FLIGHT CYCLES (FC)
A350-900 PRE MOD 113420	120000	28800
A350-900 POST MOD 113420	146000	35000
A350-1000	120000	28800

#### 4. DEFINITION OF ALS PART 2 CONTENT

# 4.1 DAMAGE-TOLERANT AIRWORTHINESS LIMITATION ITEMS (DT ALI)

ALS Part 2 provides in SECTION 3<del>SECTION 3</del> and SECTION 4 structural maintenance tasks thresholds/intervals and the related structural maintenance task description with the quoted task level and access.

#### 5. BASIC RULES

#### 5.1 <u>CLOCK STARTING POINT FOR DT-ALI REQUIREMENTS</u>



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This paragraph provides general rules related to the starting point for calculation of due dates or times of DT ALI identified in this document, according to the different usage parameters.

The threshold is the time at which the maintenance requirement is first due.

For DT ALI maintenance requirement whose threshold is given in Calendar Time (Cal.), the starting point to be considered is the date of Transfer Of Title (TOT) of the first Operator of the aircraft, unless otherwise stated.

For DT ALI maintenance requirement, without MOD applicability, whose threshold is given in Flight Hours (FH) or Flight Cycles (FC), the starting point to be considered is the date of the aircraft first flight, unless otherwise stated.

For DT ALI maintenance requirement, with MOD applicability, whose threshold is given in Flight Hours (FH) or Flight Cycles (FC), the starting point to be considered is the date of MOD embodiment, unless otherwise stated.

For repetitive maintenance requirements, the interval usage parameters (years, FC or FH) are counted from the time the task was previously performed.

In the event that the first task is accomplished very early, such that the period (Calendar time, FC, FH) between initial task accomplishment and the threshold is greater than the interval, the next task can be performed at the threshold (rather than the repeat interval).

When alternative inspection methods are provided, the next interval applicable is the one associated with the inspection method used at the last inspection. In the same way, when the method of inspection is revised to a more stringent one, the next interval applicable is the one associated with the inspection method used at the last inspection.

"Touch and Go" cycles can be neglected if they are less than 5% of the total number of Flight Cycles up to threshold inspection or between two consecutive inspections. Each "Touch and Go" cycle above 5% is to be counted as one Flight Cycle, up to threshold inspection or between two consecutive inspections.

Credit may be taken for accomplishment of the MRB Report Structures Section maintenance tasks providing that they are performed with the same inspection level, and do not exceed the limit of the DT-ALI task quoted in this document, counted from point of last accomplishment.

#### 5.2 EXCEPTIONAL EXTENSIONS

Thresholds and intervals of the DT ALIs cannot be increased, unless advised by the manufacturer following approval by the Authority of the State of aircraft registry.

# 5.3 STRUCTURE CONDITIONS FOR DT ALI REQUIREMENTS

Limitations quoted in SECTION 3 and SECTION 4 are applicable to the undamaged and unrepaired structure. In cases of damage or repairs or alterations, the DT ALI maintenance requirements may have to be adapted, or additional requirements may be required. For damaged, repaired and/or altered areas with specific supplemental inspections, the DT ALI maintenance requirements listed in this document do not apply. In these cases, only requirements given in the relevant repair or alteration documents (SRM or Specific Repair Design Approval Sheet (RDAS) or specific Repair Design Approval Form (RDAF), or other regulatory approved document) shall replace the DT ALI maintenance requirements listed in this document for the damaged/repaired/altered area. However, the original DT ALI maintenance requirement will remain applicable for the rest of the not damaged/repaired/altered inspection area.



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It is assumed that the structure to be inspected is in a state of cleanliness, which allows a satisfactory inspection to be carried out at the required inspection level.

Where existing Temporary Protection System (TPS) permits unobscured assessment of the condition of the structure, then that TPS may remain in place for the inspection.

If damage is found or suspected (such as bulging skin, paint discoloration) then the full extent of any damage must be clearly identified using appropriate inspection techniques and/or disassembly when necessary. This may require additional access to that stated for the maintenance task.

Damage has to be evaluated and repaired in accordance with the SRM or other documentation acceptable to the relevant Airworthiness Authority.

If inspections indicate evidence of deterioration, appropriate further actions shall be taken to prevent similar deteriorations from occurring in the Operator's fleet.

# 5.4 CORROSION CONTROL TO LEVEL 1 OR BETTER / ACCIDENTAL DAMAGE

The ALS Part 2 requires that corrosion is controlled to Level 1 or better on all principal structural elements and detailed design points that could contribute to catastrophic failure of the aircraft.

The Corrosion Prevention and Control Program (CPCP) defined in the Structure Section of the A350 MRB Report is an acceptable means of compliance.

The Structure Section (Section D) of the A350 MRB Report provides opportunities for timely detection of accidental damage and is an acceptable means of compliance for accidental damage.

# 6. REPORTING

Any damage, such as a fatigue crack or corrosion greater than Level 1, found at any time on a Principle Structural Element (PSE), or Fatigue Critical Structure (FCS), as identified in the SRM Chapter 51, shall be reported in accordance with operational rules of registration of the aircraft.

Airbus highly advises all operators to also report inspection findings to Airbus via the Airbus World eSite: Airbus World > Content Library > Maintenance and Engineering > Scheduled Maintenance Requirements > MPD Reporting Template.

This then gives access to the appropriate reporting spreadsheet and the associated "MPD Task Reporting Guidelines".

All reports should be sent to <a href="MPDtask.Reports@airbus.com">MPDtask.Reports@airbus.com</a>. Any related questions should be sent to the same address. Operators will receive an acknowledgement for data reports.

# 7. PRODUCTION CONCESSIONS, REPAIRS, ALS VARIATIONS, AIRWORTHINESS DIRECTIVES AND ALTERNATIVE METHODS OF COMPLIANCE

Limitations of the ALS Part 2 may be superseded by instructions given in either a production concession, a Repair Design Approval Sheet (RDAS), a Repair Design Approval Form (RDAF), an ALS Variation, an Alternative Method of Compliance (AMOC), an Airworthiness Directive (AD) or exemption provided by National Aviation Authorities (e.g. exemption supported by ASAC – Airbus Statement of Airworthiness Compliance).

It is Operator's responsibility to refer to the applicable limitations.



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When a limitation affected by a production concession/repair solution/AD/AMOC is amended within the Revision of the ALS Part 2 subsequent to the issuance date of the production concession/repair solution/AD/AMOC, Operators are requested to contact Airbus for guidance to establish the impact on production/repair solution/AD/AMOC.

# 8. MODIFICATIONS/REPAIRS NOT DEVELOPED BY AIRBUS DOA CERTIFICATE EASA.21J.031

If an aircraft/component has a modification or repair embodied, that has not been developed under the authority of Airbus Design Organization Approval (DOA) No EASA.21J.031, and affects the content of the ALS, the Design Approval Holder (e.g. Supplementary Type Certificate (STC) holder) is responsible to provide any necessary adaptations of the ALS Part 2 airworthiness limitations.



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#### **SECTION 2. EXPLANATION OF TABLE FORMAT**

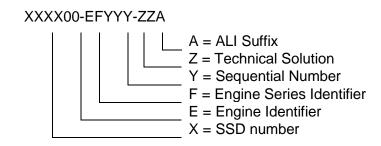
The Damage-Tolerant Airworthiness Limitation Items (DT ALI) are presented in SECTION 3<del>SECTION 3</del> and SECTION 4 of ALS Part 2. Detailed information is given below to explain the table provided on subsequent pages.

# 1. DAMAGE-TOLERANT AIRWORTHINESS LIMITATION ITEMS (SECTION 3SECTION 3 and SECTION 4)

TASK REFERENCE	ACCESS	TASK DESCRIPTION	THRESHOLD	INTERVAL	APPLICABILITY

# (1) TASK REFERENCE

This column indicates the DT ALI task number, e.g. 531000-00012-01A. It is composed of 14 digits as follows:



The SSD number is composed of six digits, e.g. 531000-00012-01A.

The first set of two digits, e.g. **53**1000-00012-01A, is in accordance with the A350 ATA 100 breakdown, showing the major section where the DT ALI is located, e.g. 53 Fuselage.

The second set of two digits, e.g. 53**10**00-00012-01A, is in accordance with the SSD breakdown, showing the sub-section where the DT ALI is located, e.g. 53-10 Nose fuselage.



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The last set of two digits, e.g. 5310**00**-00012-01A, is always 00.

The Engine Identifier is composed of one digit, e.g. 531000-**0**0012-01A. It follows the SSD number separated by a dash. It shows the engine manufacturer. It is 0 in case it is not applicable.

The Engine Series Identifier is composed of one digit, e.g. 531000-0**0**012-01A. It follows the Engine Identifier. It shows the engine type. It is 0 in case it is not applicable.

The Sequence Number is composed of three digits, e.g. 531000-00**012**-01A. It follows the Engine Series Identifier. It identifies different inspection requirements within the same DT ALI ATA Chapter.

The Technical Solution is composed of two digits, e.g. 531000-00012-**01**A. It follows the Sequence Number separated by a dash. It identifies the different applicability e.g. aircraft series, mod status, etc. This digit is also used to differentiate between minor access differences e.g. different panel numbers.

The ALI Suffix is composed of one digit, e.g. 531000-00012-01**A**. It follows the Technical Solution. It is always an A.

# (2) ACCESS

This column indicates the access requirements to adequately perform the inspection, i.e. all items listed must be removed or opened (hinged panels/doors) unless otherwise stated (e.g. insulation to be displaced). For each DT ALI, the stated access is considered sufficient to perform the inspection task.

# (3) TASK DESCRIPTION

This column provides the task title and identifies the zone/structural significant item concerned by the task. It includes the inspection level, the description and the boundaries of the DT ALI to be inspected. All items within this boundary are to be inspected, e.g. fasteners, cutouts, attachments, unless otherwise stated. Additional information may be added to clarify the inspection area. For Special Detailed Inspections the NDT method is to be stated between brackets.

Where applicable, notes providing details such as alternative tasks, specific grace periods or tasks to be performed at the same time, will be included.



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# (4) THRESHOLD

This column provides the maximum period of time expressed in usage parameters between the first flight of the aircraft and the first due completion of the task.

#### (5) INTERVAL

This column provides the maximum period expressed in usage parameters between the completion of a task and its next due accomplishment.

# (6) APPLICABILITY

This column lists the aircraft type, series, model, weight variant group or modification status to which the DT ALI requirement is applicable.

In cases where the modification number contains a "L" number, the embodiment status of each aircraft is given in the delivery documentation "Conformity to the design standard requirements" under the heading "MP Details for Mod Embodiment Status". Please refer to AirbusWorld eSite: Customisation & Delivery -> Acceptance & Delivery -> Conformity Documentation -> A.I.R -> Aircraft Inspection Report.

Some examples are given below.

APPLICABILITY	TASK APPLICABLE TO
ALL	All A350 aircraft
A350-900	All A350-900 series aircraft
A350-1000	All A350-1000 series aircraft
A350-941	A350-941 models aircraft only
A350-900 PRE XXXX	All A350-900 series aircraft on which modification XXXX has not been embodied
A350-900 POST YYYY	All A350-900 series aircraft on which modification YYYY has been embodied



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APPLICABILITY	TASK APPLICABLE TO
A350-900 POST XXXX OR A350-900 POST YYYY	All A350-900 series aircraft on which modifications XXXX or YYYY have been embodied
A350-900 POST XXXX PRE YYYY	A350-900 series aircraft only on which modification XXXX has been embodied and modification YYYY has not been embodied



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# SECTION 3. DAMAGE TOLERANT - AIRWORTHINESS LIMITATIONS ITEMS

Damage Tolerant - Airworthiness Limitations Items can be found in the attached excel file "A350 ALS Part 2 Revision 07.xlsx".



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#### SECTION 4. DAMAGE TOLERANT – AIRWORTHINESS LIMITATIONS ITEMS – SPECIFIC AIRCRAFT CONFIGURATIONS

In addition to requirements listed in SECTION 3, requirements applicable to specific aircraft configurations are presented in SECTION 4.

The following Weight Variants are considered specific aircraft configurations:

AIRCRAFT MODELS	WEIGHT VARIANTS	GROUP (if any)
A350-941	009	No Grouping

Requirements from the A350 ALS Part 2 SECTION 3 – DAMAGE TOLERANT - AIRWORTHINESS LIMITATIONS ITEMS remain applicable to all Weight Variants including specific aircraft configurations.

Damage Tolerant - Airworthiness Limitations Items – Specific aircraft configurations can be found in the attached excel file "A350 ALS Part 2 Revision 07.xlsx".

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# AIRWORTHINESS LIMITATIONS SECTION

# **APPENDIX A. ABBREVIATIONS**

ABBREVIATION	MEANING
AD	Airworthiness Directive
ALI	Airworthiness Limitation Item
ALS	Airworthiness Limitations Section
AMOC	Alternative Means Of Compliance
ASAC	Airbus Statement of Airworthiness Compliance
ASR	Aircraft Structure Repairs
ATA	Air Transport Association of America
Cal.	Calendar Times
CFR	Code of Federal Regulations
CFRP	Carbon Fiber Reinforced Plastic
CPCP	Corrosion Prevention and Control Program
D	Deleted
DOA	Design Organization Approval
DT	Damage-Tolerant
DSG	Design Service Goal
EASA	European Aviation Safety Agency
EIS	Entry Into Service
FAA	Federal Aviation Administration
FC	Flight Cycle
FCS	Fatigue Critical Structure
FH	Flight Hour
FR	Frame
FWD	Forward
HFEC	High Frequency Eddy Current (NDT inspection method)
LH	Left Hand
LFEC	Low Frequency Eddy Current (NDT inspection method)
MLG	Main Landing Gear
МО	Month
MOD	Modification

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ABBREVIATION	MEANING
MP	Modification Proposal
MPD	Maintenance Planning Document
MRB	Maintenance Review Board
MRBR	Maintenance Review Board Report
MSN	Manufacturer Serial Number
MTOW	Maximum Take Off Weight
N	New
N/A	Not Applicable
NDT	Non-Destructive Test
NLG	Nose Landing Gear
OMP	Operators approved Maintenance Program
PAX	Passenger
PSE	Principal Structural Element
R	Revised
RDAF	Repair Design Approval Form
RDAS	Repair Design Approval Sheet
RH	Right Hand
ROTO	Rotating probe test (NDT inspection method)
SB	Service Bulletin
soc	Summary Of Changes
SRM	Structural Repair Manual
SSD	Significant Structure Dossier
STC	Supplemental Type Certificate
STR	Stringer
TC	Torque Check (NDT Inspection method)
TC	Type Certificate
THS	Trimmable Horizontal Stabilizer
тос	Table Of Contents
тот	Transfer Of Title
TPS	Temporary Protection System
US	Ultra Sonic (NDT inspection method)

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ABBREVIATION	MEANING	
WV	Weight Variant	

# **APPENDIX B. TERMS AND DEFINITIONS**

TERM	DEFINITION	
AIRCRAFT STRUCTURE	Consists of all load-carrying members including wings, fuselage, empennage, engine mountings, landing gear, flight control surfaces, and related points of attachment. The actuating portions of items such as landing gear, flight controls, doors, etc. are treated as systems components. Attachment of the actuators to the airframe is treated as structure.	
CALENDAR TIMES (Cal.)	Month(s): equivalent of 1 calendar month (can be calculated as 1/12 calendar year). Year(s): equivalent of 12 calendar months (can be calculated as 365,25 days).	
COMPLIANCE TIME	Period of time given to Operators to accomplish maintenance tasks and/or replace items (at component or aircraft level) having exceeded or close to exceed the new/reduced airworthiness limitations provided in the Revision/Variation.	
CONTINUED AIRWORTHINESS	Is the process of ensuring that the level of airworthiness guaranteed by TC is maintained for each individual aircraft at the time of its Entry-Into-Service and during all its service life	
DAMAGE TOLERANCE CONCEPT	The damage-tolerance evaluation of structure is intended to ensure that should serious fatigue, corrosion, or accidental damage occur within the operational life of the aeroplane, the remaining structure can withstand reasonable loads without failure or excessive structural deformation until the damage is detected.  Damage-tolerance design is required, unless it entails such complications that an effective damage-tolerant structure cannot be achieved within the limitations of geometry, inspectability, or good design practice. Under these circumstances, a design that complies with the fatigue evaluation (safe life) requirements is used.	
DAMAGE- TOLERANT AIRWORTHINESS LIMITATION ITEMS (DT ALI)	Mandatory instructions and airworthiness limitations arising from fatigue and damage tolerance evaluation of damage tolerant structural elements whose failure could contribute to catastrophic failure of the aircraft.	
DETAILED INSPECTION	An intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses etc. may be necessary. Surface cleaning and elaborate access procedures may be required.	
FLIGHT CYCLES (FC)	A complete take-off and landing sequence.	

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TERM	DEFINITION	
FATIGUE CRITICAL STRUCTURE (FCS)	FCSs are structures that are susceptible to fatigue cracking whose failure could contribute to catastrophic failure of the aircraft.	
FLIGHT HOUR (FH)	The accumulated time intervals between 'wheels-off' and 'wheels-on'.	
GENERAL VISUAL INSPECTION	A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or drop-light and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.	
IMPLEMENTATION PERIOD	The period of time allocated to Operators to update their approved Maintenance Program.	
INTERVAL	The maximum period expressed in usage parameters between the completion of a task and its next due accomplishment.	
PRINCIPAL STRUCTURAL ELEMENT (PSE)	PSEs are elements that contribute significantly to carrying flight, ground or pressurization loads and whose failure could directly result in catastrophic failure of the aircraft.	
SPECIAL DETAILED INSPECTION	An intensive examination of a specific item, installation, or assembly to detect damage, failure or irregularity. The examination is likely to make extensive use of specialized Inspection Techniques and/or equipment. Intricate cleaning and substantial access or disassembly procedure may be required. When such inspections are required, detailed NDT procedures are described in the A350 Non-Destructive Testing Data.	
THRESHOLD	The maximum period of time expressed in usage parameters between the first flight of the aircraft, and the first due completion of the task. Subsequent accomplishment deadlines are obtained by adding the repeatinterval and its multiples to the threshold.	
TOUCH AND GO	A landing in which an aircraft touches the runway and does not come to a full stop prior to commencing an additional flight.	
USAGE PARAMETERS	The unit of measure, Flight Hours (FH), Flight Cycles (FC) or Calendar Time (HOURS, DAYS, MONTHS, YEARS) for inspection threshold/intervals.	



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# APPENDIX C. LIST OF DELETED ALI TASKS

TASK REFERENCE	SUMMARY OF CHANGES
531000-00012-01A	Task deleted in ALS Part 2 Revision 02
531000-00017-01A	Task deleted in ALS Part 2 Revision 02
531000-00018-01A	Task deleted in ALS Part 2 Revision 02
533000-00007-01A	Task deleted in ALS Part 2 Revision 03
533000-00021-01A	Task deleted in ALS Part 2 Revision 02
533000-00024-01A	Task deleted in ALS Part 2 Revision 03
554000-00001-01A	Task deleted in ALS Part 2 Revision 04
575400-00001-01A	Task deleted in ALS Part 2 Revision 04
524100-00001-01A	Task deleted in ALS Part 2 Revision 05
524100-00002-01A	Task deleted in ALS Part 2 Revision 05
533000-00015-01A	Task deleted in ALS Part 2 Revision 05
533000-00016-01A	Task deleted in ALS Part 2 Revision 05
783200-00001-01A	Task deleted in ALS Part 2 Revision 05
783200-00003-01A	Task deleted in ALS Part 2 Revision 05
783200-00004-01A	Task deleted in ALS Part 2 Revision 05
783200-00005-01A	Task deleted in ALS Part 2 Revision 05
783200-00007-01A	Task deleted in ALS Part 2 Revision 05
535000-00004-03A	Task deleted in ALS Part 2 Revision 05
535000-00005-02A	Task deleted in ALS Part 2 Revision 05
535000-00007-02A	Task deleted in ALS Part 2 Revision 05
535000-00009-02A	Task deleted in ALS Part 2 Revision 05
535000-00014-02A	Task deleted in ALS Part 2 Revision 05
523000-00008-02A	Task deleted in ALS Part 2 Revision 06
523000-00010-02A	Task deleted in ALS Part 2 Revision 06
531000-00001-01A	Task deleted in ALS Part 2 Revision 06
531000-00024-01A	Task deleted in ALS Part 2 Revision 06
533000-00002-01A	Task deleted in ALS Part 2 Revision 06
533000-00006-01A	Task deleted in ALS Part 2 Revision 06
533000-00006-03A	Task deleted in ALS Part 2 Revision 06

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533000-00035-01A	Task deleted in ALS Part 2 Revision 06
533000-00045-01A	Task deleted in ALS Part 2 Revision 06
533000-00045-02A	Task deleted in ALS Part 2 Revision 06
533000-00048-01A	Task deleted in ALS Part 2 Revision 06
535000-00011-01A	Task deleted in ALS Part 2 Revision 06
535000-00012-01A	Task deleted in ALS Part 2 Revision 06
535000-00013-01A	Task deleted in ALS Part 2 Revision 06
535000-00019-01A	Task deleted in ALS Part 2 Revision 06
535000-00022-01A	Task deleted in ALS Part 2 Revision 06
535000-00023-01A	Task deleted in ALS Part 2 Revision 06
535000-00025-01A	Task deleted in ALS Part 2 Revision 06
545000-00005-01A	Task deleted in ALS Part 2 Revision 06
545000-00005-02A	Task deleted in ALS Part 2 Revision 06
571000-00003-01A	Task deleted in ALS Part 2 Revision 06
571000-00003-02A	Task deleted in ALS Part 2 Revision 06
572000-00004-01A	Task deleted in ALS Part 2 Revision 06
572600-00001-02A	Task deleted in ALS Part 2 Revision 06
572600-00003-01A	Task deleted in ALS Part 2 Revision 06
572600-00003-02A	Task deleted in ALS Part 2 Revision 06
574000-00006-01A	Task deleted in ALS Part 2 Revision 06
712000-00002-01A	Task deleted in ALS Part 2 Revision 06
712000-00002-02A	Task deleted in ALS Part 2 Revision 06
712000-00003-01A	Task deleted in ALS Part 2 Revision 06
712000-00003-02A	Task deleted in ALS Part 2 Revision 06
712000-00004-01A	Task deleted in ALS Part 2 Revision 06
712000-00005-01A	Task deleted in ALS Part 2 Revision 06



# AIRWORTHINESS LIMITATIONS SECTION

# APPENDIX D. HISTORY FILE

# **RECORD OF REVISIONS**

REVISION NUMBER	REASONS FOR REVISION	REVISION DATE
00	Initial issue	SEP 30/14
01	The A350 ALS Part 2 Revision 01 updates some ALI tasks for MSN 006 Entry Into Service (EIS).	DEC 03/14
02	The A350 ALS Part 2 Revision 02 increases the operational limitation from 5000 FC to 7500 FC and introduces the related changes.  It also extends the applicability of the document to A350-900 series WV003 and WV004.	DEC 14/15
03	The A350 ALS Part 2 Revision 03 increases the operational limitation from 7500 FC to 15000 FC and introduces the related changes.  It also extends the applicability of the documents A350-900 series WV005, WV008 and WV011.	JUN 28/16
04	The ALS Part 2 Revision is issued to reflect the introduction of the A350-1000. It also introduces a dedicated paragraph which states that some maintenance procedures, related to scheduled maintenance tasks, are published after entry into service of the first aircraft. Besides, this Revision introduces MOD 108010 and 108528 to optimize S19 metallic frames. Finally, it provides new DT-ALI tasks following MOD 110102 embodiment (Certification of A350 MSN 00005 configuration after refurbishment). It also extends the applicability of the documents A350-900 series WV002, WV007, WV009, WV012, WV014 and WV015.	DEC 15/17
05	The A350 ALS Part 2 Revision 05 is issued to reflect introduction of revised ATA 53 ALI tasks as well as specific requirements related to MOD 111514.  It also extends the applicability of the A350-900 series to WV010 and WV013 and the applicability of the A350-1000 series to WV002 and WV004.	SEP 14/18



# AIRWORTHINESS LIMITATIONS SECTION

REVISION NUMBER	REASONS FOR REVISION	REVISION DATE
06	The A350 ALS Part 2 Revision 06 is issued to reflect introduction of MOD 111909 introduces Step 06 improvement package on A350-900 and A350-1000 aircraft series and MOD 113420 which introduces Extended Service Goal for A350-900 aircraft series  In addition, opportunity has been taken to introduce the following subjects:  • Changes related to the increase of the trigger for the maintenance program & introduction of tasks 533000-00032-01A and 572000-00008-01A;  • Changes related to Accidental Damages Policy update; • Changes related to Refurbishment activity:  • MOD 114466 (Certify MSN065 configuration); • MOD 113094 (Reinforce MLGB frame and junction locally for MSN065 and MSN071);  • MOD 11160 (Implements CFRP Structure for PAX Door Surroundings in Nose Fuselage).  • Changes related to following minor MODs  • MOD 115079 (Increase fatigue life of door 1 sill);  • MOD 112459 (Remove ALI on Frame 57 and Rear Canted Beam);  • MOD 112574 (Introduce material and design change on MLGB diaphragm for -1000);  • MOD 112574 (Remove ALI on CEF ASSY);  • MOD 112696 (Change the material of Ti parts sized by fatigue and damage tolerance from ABS5125A to ABS5125B).  • Miscellaneous changes:  • Creation of task 535000-00029-01A to account for specific requirements relating to ARS XW53.0237 – ARM 15  • Applicability corrections, threshold/Interval and task description improvements, deletion of tasks.  It also extends the applicability of the A350-900 series to WV016, WV018, WV019 and WV023 and the applicability of the A350-1000 series to WV005, WV009, WV010 and WV011.	MAY 29/20



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REVISION NUMBER	REASONS FOR REVISION	REVISION DATE
07	The A350 ALS Part 2 Revision 07 is issued to reflect introduction of the following:  • Variation 6.1 – Introduction of new tasks 535000-00030-01A and 535000-00031-01A and the deletion of tasks 533000-00010-01A and 533000-00020-01A.  • Miscellaneous Changes:  • MOD 114592 – Relaxation in the MLGB Gantry 3/4.  • MOD 113579 – Optimise CWB Upper Beam Assy.  • MOD 114737 – Relaxation in the area of Pylon Inboard Closing Rib.  • MOD 114407 – Improvement to Flap Support Structure  • MOD 115788 – Protection improvement in FR98 (Serial).  • MOD 115789 – Protection improvement in FR98 (Retrofit + SB).	JUN 30/21

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#### APPENDIX E. SUMMARY OF CHANGES

#### **GENERAL**

Summary Of Changes (SOC) from previous ALS revisions are not published within this ALS Part 2. SOC for previous revisions could be found within the related revision.

Except in SECTION 3<del>SECTION 3</del> and SECTION 4, non-administrative changes are highlighted with a revision bar in the left hand margin in front of the line different from previous revision of the ALS Part 2.

In SECTION 3SECTION 3 and SECTION 4, changes to maintenance requirements are highlighted with the following movement codes printed in the left hand margin of the maintenance requirements when different from previous issue of the ALS Part 2:

- <N> = maintenance requirement is new,
- <R> = maintenance requirement has been revised,
- <D> = maintenance requirement has been deleted.

In this section, administrative changes are not highlighted but are identified in the SOC column.

#### **COVER PAGE**

The cover page has been revised to amend the Revision number.

#### TABLE OF CONTENT

Table of content has been updated according to the changes performed throughout the document.

# **REVISION STATUS**

No change.

#### **COMPLIANCE TIME**

This section has been updated to revise the compliance time paragraph and to provide the list of instructions and airworthiness limitations which have been revised and introduced in the A350 ALS Part 2 Revision 07 as well as their associated compliance time (when applicable). This information comes from the original Variations and/or additional approved changes which have been introduced in the current Revision.

#### **SECTION 1 – INTRODUCTION**

Page 9, 10 RDAF – Repair Design Approval Form included as per OIT 999.0057/19 rev02.

#### SECTION 2 – EXPLANATION OF TABLE FORMAT

No change.

# SECTION 3 - DAMAGE TOLERANT - AIRWORTHINESS LIMITATIONS ITEMS

No change.

# <u>SECTION 4 – DAMAGE TOLERANT – AIRWORTHINESS LIMITATIONS ITEMS – SPECIFIC AIRCRAFT CONFIGURATIONS</u>

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#### AIRWORTHINESS LIMITATIONS SECTION

No change.

# <u>APPENDIX A – ABBREVIATIONS</u>

The following abbreviations have been added: RDAF.

# <u>APPENDIX B – TERMS AND DEFINITIONS</u>

No change.

# APPENDIX C - LIST OF DELETED ALI TASKS

This section lists the deleted ALI tasks from previous Revision.

# <u>APPENDIX D – HISTORY FILE</u>

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The section has been updated to add the reason for issuance of the A350 ALS Part 2 Revision 07.

# APPENDIX E – SUMMARY OF CHANGES

This section provides the changes introduced in the ALS Part 2 Revision 07.